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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,533	08/18/2000	Jiebo Luo	80632DMW	7789

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PATENT LEGAL STAFF  
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EXAMINER

WU, JINGGE

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/642,533

Applicant(s)

LUO ET AL.

Examiner

Jingge Wu

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 91-152 is/are pending in the application.
- 4a) Of the above claim(s) 131-152 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 91-130 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

1. Applicants' response to the last Office Action, filed January 14, 2004 has been entered and made of record.
2. The rejection of claims 1-12, 15, 19, 22, 27, 29, 32, 36, 39, 44, 46-57, 61, 64, 67, 74, 77, 81, 84, and 89 are rendered moot by applicant's cancellation of those claims.
3. Applicants' amendment has required new grounds of rejection. New grounds rejection are therefore presented in the Office Action.
4. Applicant's arguments with respect to claims 1-12, 15, 19, 22, 27, 29, 32, 36, 39, 44, 46-57, 61, 64, 67, 74, 77, 81, 84, and 89 regarding to Luo have been fully considered but are moot in view of the new ground(s) of rejection.
5. Newly submitted claim 131-152 directed to inventions that are independent or distinct from the invention originally claimed for the following reasons: claims 131-141 and 142-152 directed to species II and III, respectively, corresponding figs. 3 and 4.

Since applicant has received an action on the merits for the originally presented invention, species I, this invention has been constructively elected by original presentation for prosecution on the merits (note that generic claims 91-105 are believed to be not allowable). Accordingly, claims 131-152 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 102***

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in–

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 91-130 are rejected under 35 U.S.C. 102(e) as being anticipated by US 604851 to Luo et al.

As to claim 91, Luo discloses a method for modifying an image having pixels, comprising:

automatically identifying a main subject (candidate sky ) of the image (fig. 6, 73-74, col. 9 lines 25-35); and

automatically altering pixel values (eliminating pixel having texture above threshold or fills voids of connected components) to emphasized the main subject, said altering following identifying (abstract, fig. 6, 75, col. 9 lines 38-39, 57-67 note that thresholding, eliminating, and region growing are conducted after identifying the main subject, candidate sky).

As to claim 92, Luo further discloses the step of identifying comprises segmenting the image into a plurality of regions (col. 9 lines 25-43).

As to claim 93, Luo further discloses generating a belief map of said region (fig. 6 71, col. 9 lines 15-27, col. 8 lines 60-64).

As to claims 98-99, Luo further discloses altering emphasizes the main subject are part of said main subject (abstract, fig. 6, 75, col. 9 lines 38-39, 57-67, note that

filling voids of connected components that is main subject, and eliminating connected components that are not blue sky).

As to claims 100-101, Luo further discloses desaturating the pixels that are not a part of said main subject (col. 16 lines 3-14) and in desaturating further comprises: calculating luminance values of the pixels that are not a part of main subject and replaying the color values of the pixels that are not a part of the main subject with respective luminance value (abstract, fig. 6, 75, col. 9 lines 38-39, 57-67, col. 15 line 65-col. 16 line 14)

As to claims 102-104, Luo further discloses enhance saturation of the main object pixels (sky) (and inverting the hue values of pixels corresponding whether the pixels are the part of main subject (sky) (col. 10 lines 32-67).

As to claim 105, Luo further discloses segmenting the image into plurality of regions and assigning a belief value to the pixels corresponding to the level of saliency (col. 9 lines 15-42).

As to claims 94-97, Luo further discloses altering color saturation (col. 16 lines 2-14), hue (color, col. 10 lines 32-67, note that adding blue to pixels in the void or eliminating color pixels not in sky (set to respective luminance) can be viewed as altering hue), luminance and pixel blur (abstract, col. 10 lines 48-67, col. 15 lines 26-37).

As to claims 106-120, the claims are corresponding system claims to claims 91-105. The discussions are addressed with regard to claims 91-105.

As to claim 121, Luo discloses a method of modifying an image having pixels, comprising:

automatically generating one or more belief values, each being associated with one of plurality of regions of the image, said belief values each being related to the

probability that the associated region is a main subject of the image (fig. 2, 201, fig. 4a-d, col. 8 lines 47-64);

following said generating, automatically altering pixel values in the plurality regions of the image, in accordance with the associated belief values (fig. 6, 75, col. 10 lines 49-67).

As to claim 126, the limitations are addressed with regard to claim 121.

As to claims 122-125 and 127-130, the limitations are addressed with regard to claims 94-105.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

**Jingge Wu**

**Primary Patent Examiner**

